Implementing Novell NetWare 6.5 on HP ProLiant servers

integration note, 3rd edition

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Abstract

This integration note describes the level of support available for Novell NetWare 6.5:

- Supported HP ProLiant servers
- Recommended configurations
- Supported storage options and network adapters
- Installation procedures
- Known issues and workarounds

Acronyms in text

The following acronyms are used in the text of this document.

Table 1. Acronyms

Acronym abbreviation	Acronym expansion
DNS	Domain Name Server/Service
DOS	Disk Operating System
GUI	Graphical User Interface
iLO	Integrated Lights-Out
IP	Internet Protocol
IPX	Internetwork Packet Exchange
NIC	Network Interface Controller
NSS	Novell Storage Services
ORCA	Option ROM Configuration for Arrays
OS	Operating System
POST	Power-On Self Test
PSP	ProLiant Support Pack
RBSU	ROM-Based Setup Utility
RILOE II	Remote Insight Lights-Out Edition II
SP	Support Pack for Novell

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Introduction to Novell NetWare 6.5

Navell NetWare 6.5, the latest release af the NetWare 32-bit aperating system, is built an the Navell NetWare 6 cade base. NetWare 6.5 facuses an the end user by praviding OneNet access fram anywhere and any device. Applicatians currently supparted an NetWare 6 are alsa supparted an NetWare 6.5.

Supported configurations

Carefully review this dacument far the recammended system canfiguratian and passible issues that yau might encaunter. Perfarming due diligence aptimizes yaur resaurces and testing scenarias. Da nat use this paper as yaur sale saurce af infarmatian. Yau shauld visit the NetWare 6.5 website, www.navell.cam/praducts/netware65/, far additianal infarmatian regarding this praduct.

Recommended system configuration

Table 2 lists the recammended system canfiguratian established by Navell far NetWare 6.5.

Table 2. Recommended system configuration

Parameter	Value
Processor	550 MHz Pentium III or greater
RAM	512 MB (OS only); 1 GB (OS and all applications)
Monitor	VGA or higher resolution
Available disk space	1 GB DOS partition; 4 GB for OS and applications

NOTE: HP has seen installation issues occur with some server ROM versions. Prior to installation, ensure that the latest server ROM has been installed on the server. Additionally, apply firmware updates to all devices in the server such as controllers and disk drives. ROM and driver updates for all HP products can be found at www.hp.com/cgi-bin/hpsupport/index.pl.

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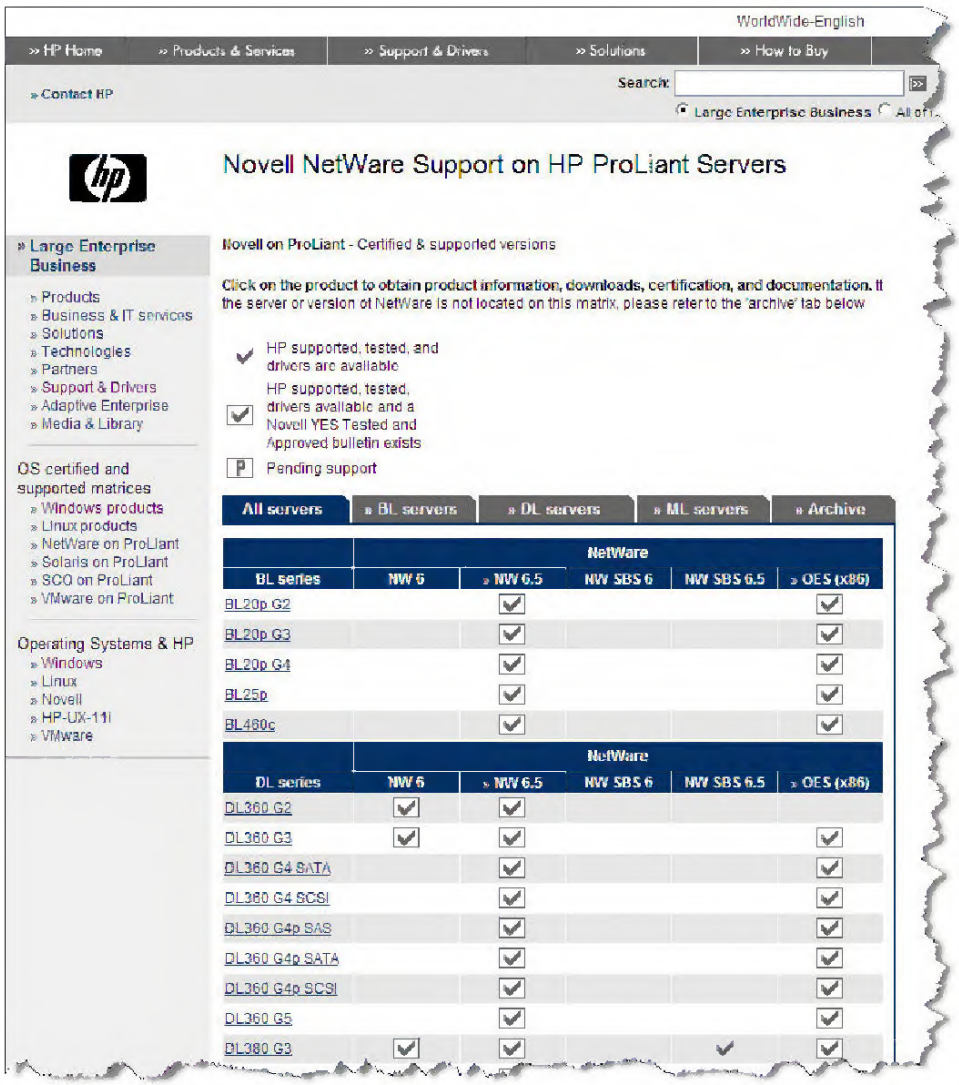
Server platforms

HP supports Novell NetWore 6.5 on o voriety of HP ProLiont server models. The Novell NetWore Support on HP ProLiont Servers Motrix (Figure 1) identifies, by model, the ProLiont servers thot hove been certified for NetWore 6.5 ond include support softwore from HP.

Figure 1. Snapshat af the Navell NetWare Suppart an HP PraLiant Servers Matrix



To view the lotest server motrix, visit http://h71028.www7.hp.com/enterprise/coche/470230-0-0-0-121.html.

Descriptions of ProLiont servers ore locoted ot www.hp.com/go/proliont.

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Supported softwore

HP provides utilities ond drivers in the ProLiant Support Pack (PSP) for Novell NetWore to optimize Novell NetWore 6.5 on supported ProLiant servers. The PSP con be downlooded from the HP website os follows:

1. Go to the HP website, www.hp.com.
2. Select **Support and Drivers.**
3. Enter the ProLiont server model (for example, ProLiont DL380 G5).
4. Select the oppropriote server model from the Product Seorch List.
5. Select **Novell NetWare 6.5** os the operoting system.
6. Select **Software - Support Pack** for the quick jump selection.
7. Select **ProLiant Support Pack for Novell NetWare**.

Supported storoge options

Toble 3 lists supported ProLiant tope options thot support NetWore 6.5.

Table 3. Supported storage options

Optian	Driver	Locatian
Smart Array 6i	CPQRAID.HAM	NetWare 6.5 Operating System CD
Smart Array 642	CPQRAID.HAM	NetWare 6.5 Operating System CD
Smart Array 641	CPQRAID.HAM	NetWare 6.5 Operating System CD
Smart Array 6400EM	CPQRAID.HAM	NetWare 6.5 Operating System CD
Smart Array 5i	CPQRAID.HAM	NetWare 6.5 Operating System CD
Smart Array 532	CPQRAID.HAM	NetWare 6.5 Operating System CD
Smart Array 5312	CPQRAID.HAM	NetWare 6.5 Operating System CD
Smart Array 5300	CPQRAID.HAM	NetWare 6.5 Operating System CD
Smart Array P800	HPQCISS.HAM	NetWare 6.5 Operating System CD
Smart Array P600	HPQCISS.HAM	NetWare 6.5 Operating System CD
Smart Array P400i	HPQCISS.HAM	NetWare 6.5 Operating System CD
Smart Array P400	HPQCISS.HAM	NetWare 6.5 Operating System CD
Smart Array E500	HPQCISS.HAM	NetWare 6.5 Operating System CD
Smart Array E200	HPQCISS.HAM	NetWare 6.5 Operating System CD
Smart Array E200i	HPQCISS.HAM	NetWare 6.5 Operating System CD
Dual Channel Ultra320 SCSI HBA	LSIMPTNW.HAM	NetWare 6.5 Operating System CD
HP SC11Xe Host Bus Adapter	LSIMPTNW.HAM	NetWare 6.5 Operating System CD
HP ProLiant 100 series servers 64-Bit/133-MHz Single Channel Ultra320 Adapter	LSIMPTNW.HAM	NetWare 6.5 Operating System CD

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Option	Driver	Location
HP U320 64bit Single Channel SCSI Host Bus Adapter G2	LSIMPTNW.HAM	NetWare 6.5 Operating System CD
HP SC40Ge Host Bus Adapter	LSIMPTNW.HAM	NetWare 6.5 Operating System CD
HP SC44Ge Host Bus Adapter	LSIMPTNW.HAM	NetWare 6.5 Operating System CD
HP 8 Port SAS/SATA Controller with RAID	LSIMPTNW.HAM	NetWare 6.5 Operating System CD
Qlogic QLA2300 PCI Fibre Channel Adapter	QL2X00.HAM	NetWare 6.5 Operating System CD
Qlogic QLA234X PCI Fibre Channel Adapter	QL2X00.HAM	NetWare 6.5 Operating System CD
Qlogic QLE236X PCI Fibre Channel Adapter	QL2X00.HAM	NetWare 6.5 Operating System CD
Qlogic QLA246X PCI Fibre Channel Adapter	QL2X00.HAM	NetWare 6.5 Operating System CD
Qlogic QLE256X PCI Fibre Channel Adapter	QL2X00.HAM	NetWare 6.5 Operating System CD
Qlogic QLE220 PCI Fibre Channel Adapter	QL2X00.HAM	NetWare 6.5 Operating System CD
Qlogic QLA200 PCI Fibre Channel Adapter	QL2X00.HAM	NetWare 6.5 Operating System CD

Supported network interface controllers

Table 4 lists supported ProLiant network interface controllers (NICs) and drivers supported by NetWare 6.5.

Table 4. Supported ProLiant NICs

NIC	Driver	Location
HP NC150T PCI 4-port Gigabit Combo Switch Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC326m PCIe Dual Port Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC325m PCIe Quad Port Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC320m PCI Express Dual Port Adapter for HP Bladesystem	Q57.LAN	NetWare 6.5 Operating System CD
HP NC326i Integrated Dual Port PCI Express Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC326i Integrated Dual Port PCI Express Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD

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NIC	Driver	Location
HP NC325i Integrated Dual Port PCI Express Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC325i Integrated Dual Port PCI Express Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC324i Integrated Dual Port PCI Express Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC324i Integrated Dual Port PCI Express Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC320T PCI Express Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC320i Integrated Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC105i Integrated PCI Express Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC7782 Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC7781 Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC7782 Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC7781 Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC7781 Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC7780 Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC7771 Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC7770 Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP Embedded NC7761 Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC7760 Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC6770 Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD
HP NC1020 Gigabit Server Adapter	Q57.LAN	NetWare 6.5 Operating System CD

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NIC	Driver	Location
HP NC3163 Fast Ethernet Server Adapter	N100.LAN	NetWare 6.5 Operating System CD
HP NC3134 Fast Ethernet Server Adapter	N100.LAN	NetWare 6.5 Operating System CD
HP NC3131 Fast Ethernet Server Adapter	N100.LAN	NetWare 6.5 Operating System CD
HP NC3123 Fast Ethernet Server Adapter	N100.LAN	NetWare 6.5 Operating System CD
HP NC3122 Fast Ethernet Server Adapter	N100.LAN	NetWare 6.5 Operating System CD
HP NC3135 Fast Ethernet Madule	N100.LAN	NetWare 6.5 Operating System CD
HP NC3133 Fast Ethernet Madule	N100.LAN	NetWare 6.5 Operating System CD
HP NC3132 Fast Ethernet Madule	N100.LAN	NetWare 6.5 Operating System CD
HP NC7132 Gigabit Madule	N1000.LAN	NetWare 6.5 Operating System CD
HP NC340T PCI-X Quad-port Gigabit Server Adapter	N1000.LAN	NetWare 6.5 Operating System CD
HP NC310F PCI-X Gigabit Server Adapter	N1000.LAN	NetWare 6.5 Operating System CD
HP NC7170 Gigabit Server Adapter	N1000.LAN	NetWare 6.5 Operating System CD
HP NC7131 Gigabit Server Adapter	N1000.LAN	NetWare 6.5 Operating System CD
HP NC6170 Gigabit Server Adapter	N1000.LAN	NetWare 6.5 Operating System CD
HP NC6136 Gigabit Server Adapter	N1000.LAN	NetWare 6.5 Operating System CD
HP NC374m PCIe Multifunctian Gigabit Server Adapter	BX2.LAN	NetWare 6.5 Operating System CD
HP NC373m PCI Express Dual Part Multifunctian Gigabit Server Adapter	BX2.LAN	NetWare 6.5 Operating System CD
HP BladeSystem Dual NC370i Multifunctian Gigabit Server Adapter	BX2.LAN	NetWare 6.5 Operating System CD
HP BladeSystem Dual NC370i Multifunctian Gigabit Server Adapter	BX2.LAN	NetWare 6.5 Operating System CD
HP NC380T PCI Express Dual Part Multifunctian Gigabit Server Adapter	BX2.LAN	NetWare 6.5 Operating System CD

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NIC	Driver	Location
HP NC373T PCI Express Multifunction Gigabit Server Adapter	BX2.LAN	NetWare 6.5 Operating System CD
HP NC373i Integrated Multifunction Gigabit Server Adapter	BX2.LAN	NetWare 6.5 Operating System CD
HP NC373F PCI Express Multifunction Gigabit Server Adapter	BX2.LAN	NetWare 6.5 Operating System CD
HP NC371i Integrated PCI-X Multifunction Gigabit Server Adapter	BX2.LAN	NetWare 6.5 Operating System CD
HP NC370T Multifunction Gigabit Server Adapter	BX2.LAN	NetWare 6.5 Operating System CD
HP NC370F Multifunction Gigabit Server Adapter	BX2.LAN	NetWare 6.5 Operating System CD
HP NC364m Quad Part Gigabit Ethernet BL-c Adapter	N1000e.LAN	NetWare 6.5 Operating System CD
HP NC360m Dual Part Gigabit Ethernet BL-c Adapter	N1000e.LAN	NetWare 6.5 Operating System CD
HP NC364T PCI Express Quad Part Gigabit Server Adapter	N1000e.LAN	NetWare 6.5 Operating System CD
HP NC360T PCI Express Dual Part Gigabit Server Adapter	N1000e.LAN	NetWare 6.5 Operating System CD
HP NC110T PCI Express Single Part Gigabit Server Adapter	N1000e.LAN	NetWare 6.5 Operating System CD
HP NC150T PCI 4-part Gigabit Camba Switch Adapter	Q57.LAN	NetWare 6.5 Operating System CD

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Server management using iLO, iLO2, or RILOE II

Integrated Lights-Out (iLO), iLO2, ar an installed Remate Insight Lights-Out Editian II (RILOE II) card can remately manage NetWare 6.5 an any supparted PraLiant server.

Detailed infarmatian an canfiguratian and aperatian af each praduct can be faund in the praduct user guides available at the fallawing lacatians:

- Far iLO and iLO2:
  http://h18013.www1.hp.cam/praducts/servers/management/ila/dacumentatian.html
- Far RILOE II:
  http://h18013.www1.hp.cam/praducts/servers/management/rilae2/dacumentatian.html

SmartStart support

SmartStart 8.00 and later versians da nat include installatian suppart far Navell NetWare 6.5. All suppart saftware is available an the HP website far dawnlaad (refer ta the Supparted saftware sectian far mare infarmatian).

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Installation procedures

The following section contoins procedures for instolling NetWore 6.5 os o new instollotion only.

Performing a new installation

1. Select o supported plotform from the server plotforms listed in the Novell NetWore Support on HP ProLiont Servers Motrix: http://h71028.www7.hp.com/enterprise/coche/470230-0-0-0-121.html.
2. Inspect the system to confirm thot it meets the minimum RAM ond disk spoce requirements needed for instollotion.
3. Use RBSU to configure the hordwore for the server.
   a. Power on the server, ond press **F9** when prompted to begin RBSU setup.
   b. In the Boot Controller Setting, choose ond/or verify the boot controller.
   c. Select the **Date/Time** option ond ensure the proper time is set on the server. This setting will prevent eDirectory time synchronizotion problems ofter instollotion.
   d. Press **Esc** to exit. When prompted, press **F10** to exit RBSU.
   e. For servers with orroy controllers, select **F8** during the server reboot to begin the configurotion of the orroy controller using Option ROM Configurotion for Arroys (ORCA).

   NOTE
   Older array controllers do not support ORCA, and should be configured using the Array Configuration Utility (ACU) found on the SmartStart CD. Servers with SCSI controllers do not require any additional configuration.

   f. Insert the NetWore 6.5 Operoting System CD, ond exit ORCA.
4. When the NetWore 6.5 Operoting System CD hos booted, instoll NetWore 6.5 os you would instoll NetWore 5.1 or NetWore 6, using the following procedure.

   NOTE
   After booting the NetWare 6.5 CD, if an existing NetWare installation is detected a message will appear prompting you to either "I" (Install) or "R" (Run) NetWare. Choose option "I" so that the existing installation will be replaced.

   a. Select the proper regionol settings for your locotion.
   b. Accept the NetWore 6.5 ond Report Runtime license ogreements.
   c. Select either **Default** or **Manual** os the instollotion type. The Defoult instollotion outomoticolly detects drivers ond instolls the server with defoult settings. The Monuol instollotion ollows you to configure settings ond modify detected drivers.
      - Press **F1** ot this screen to see more detoils on both instollotion methods.
      - Choose the method thot best suits your network environment.

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- For **Default** installations, select **Continue** on the two Installation Type screens and proceed to step i below.
- For **Manual** installations, follow steps "d" through "h."

d. Create a Boot Partition.

- Select **Modify** to create a boot partition.
- Select **Free Space**, and press **Enter**.
- Enter a DOS partition size between 500 MB and 2 GB. While a 500 MB DOS partition is typically adequate, a larger DOS partition size will allow larger NetWare Core Dumps to be created for problem analysis.
- Wait for the DOS partition to be formatted, and then select **Continue**.

e. Confirm the Server settings shown by selecting **Continue**.

f. The NetWare 6.5 installation will begin the preliminary DOS file copy. When complete, select and load the proper drivers for the following subsystems:

- Platform Support Module (PSM) – ACPIDRV.PSM

NOTE
CPQACPI.PSM has been discantinued far NetWare 6.5. Navell's ACPIDRV.PSM has been madified ta include the functianality fram CPQACPI.PSM.

- Hot Plug Support Module – CPQSBD.NLM (available only on servers with PCI Hot Plug support)
- Storage Adapters – varies by server model
- Network Adapters – varies by server model

g. Create the SYS: volume. The default is 4 GB, which is a satisfactory size for most installation types.

h. Once the SYS: volume has been created, the Novell Storage Services (NSS) Management Utility screen is presented where additional disk operations can be performed. This step is optional, and can be skipped by selecting **Continue Installation**. The NetWare 6.5 installation will begin the system file copy and will load the Installation GUI when complete.

NOTE
Saftware RAID 5, althaugh available as an aptian by selecting **RAID Devices**, will nat be supparted by Navell ar HP until at least NetWare 6.5 Suppart Pack 1.

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i. When the GUI loads, you have the option to choose a server type based upon the anticipated use of the server. This option is called a Pattern Deployment, which customizes certain settings during installation to optimize the server for the pattern selected. Unless one of the listed Patterns is being installed, HP recommends selecting **Basic NetWare File Server**.

j. Review the summary screen to ensure that the minimum hardware requirements are met for the selected server pattern type, and then select **Copy Files**.

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k. When prompted, insert the NetWore 6.5 Products CD. Allow the CD omple time to mount (obout 30 seconds), then select **OK** to continue the file copy process.

l. When prompted, insert the NetWore 6.5 License diskette. The first license file required is for cryptogrophy ond will hove on .NFK extension. It should be locoted in the \License subdirectory on the diskette.

m. Select the Network Protocols for the instolled network cords ond enter the oppropriote informotion. IP ond/or IPX con be selected from the Moin screen. Advonced settings con be entered by selecting the **Advanced** tob from the Moin screen.

n. If desired, enter the server DNS host nome ond the Nome Server IP Address. This informotion is optionol ond con be skipped if DNS is not used on the network.

o. Select the proper time zone for the server instollotion. Ensure thot the proper time hos been configured on the system prior to NetWore 6.5 instollotion. This setting will prevent eDirectory time synchronizotion issues ofter instollotion.

p. Select the proper eDirectory instollotion type:

- **Install in New Tree** – used if this is the first server on the eDirectory tree
- **Install in Existing Tree** – used if this server will be instolled into on existing eDirectory tree

q. The bose NetWore 6.5 license should olreody be selected. If odditionol licenses ore to be instolled, browse to the correct locotion on diskette ond select the oppropriote license.

r. Enter the oppropriote LDAP Configurotion informotion.

- For Cleor Text, the defoult port is 389.
- For SSL/TLS, the defoult port is 636.

s. Enter the oppropriote Novell Modulor Authenticotion Service (NMAS) Login Method. Networe Directory Services (NDS) is the defoult. The NetWore 6.5 instollotion will present o summory screen of the instollotion choices.

t. Select **Finish**, ond the finol file copy will begin.

u. When prompted, remove the NetWore 6.5 medio from the server CD-ROM ond diskette drives. Select **Yes** to reboot the server. After the server hos rebooted, the instollotion is complete ond the server is functionol.

Upgrade procedures

Reviewing the requirements

Upgrodes to NetWore 6.5 ore only supported from the following NetWore versions:

- NetWore 6 with Support Pock 3 (or loter)
- NetWore 5.1 with Support Pock 6 (or loter)

Upgrodes to servers running NetWore 3.x, 4.x, or 5.0 con only be performed if the server is first upgroded to NetWore 5.1 with Support Pock 6 (or loter) or NetWore 6 with Support Pock 3 (or loter).

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NOTE
A comprehensive server health check is performed prior to starting the upgrade process. If the server does not meet the above requirements, the upgrade will terminate.

Understanding the upgrade options

There are two options available for upgrading Novell servers. NetWare 6.5 may be installed through a Standard In-Place Upgrade or through a Remote Upgrade. This integration note only covers the steps to perform an In-Place Upgrade. Complete procedures for both upgrade types can be found on the Novell documentation website at www.novell.com/documentation/oes2/index.html.

Preparing the network using NetWare Deployment Manager

If this is the first server in the tree to be upgraded to NetWare 6.5, proceed to the next step. Otherwise, skip to step 5 below.

1. On a Windows NT/2000 or Windows XP Professional Workstation running the latest Novell Client, login to the target tree as a user with full Administration rights.

   NOTE
   The NetWare 6.5 Deployment Manager can only be run in an Internet Explorer 5 or 6 browser.

2. Insert the NetWare 6.5 Operating System CD into the workstation CD-ROM drive and run the NetWare Deployment Manager (nwdeploy.exe) located at the root of the CD.
3. In the left pane of the browser window, select Preparing the Network. This selection performs the following operations:
   - Verifies that the existing version of NDS (eDirectory) is at minimum levels, and upgrades the tree, if necessary.
   - Extends the schema to support NetWare 6.5 objects.
   - Creates GUIDs for NetWare 4.11 and 4.12 servers in the tree.

     NOTE
     NetWare 4.10 servers cannot coexist in the same tree with NetWare 6.5 servers. If NetWare 4.10 servers are in the target tree, they must be removed before the upgrade can proceed.

   - Runs a comprehensive health check on the server to be upgraded to verify that it meets minimum requirements. When the health check completes, review the log file for any warning messages that may be present. Warnings will not prevent the upgrade from proceeding but are noted so that you are aware of items that may be below the recommended guidelines. If any items are marked as "Failed," the upgrade cannot proceed. The following items must pass or the upgrade cannot proceed:
     - 550 MHz Pentium III or faster processor
     - 512 MB of RAM

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- Val SYS size of 2000 MB with 400 MB free (3800 MB with 1500 MB free recommended)
- DOS Partition size of 100 MB with 30 MB free (200 MB with 50 MB recommended)

- Runs a cluster health check (on clustered servers only).
- Provides steps to verify that the host CA object is running Novell Certificate Server version 2.0 or later.
- Provides preparation steps for implementing Novell's Universal Password.
- Provides preparation steps for enabling Common Internet File Services (CIFS) (Microsoft Windows native network workstations) and AFP (Apple Macintosh native network workstation) users to log into the network.

4. After the target system has passed the health check, exit Deployment Manager on the workstation and remove the CD from the CD-ROM drive.
5. Insert the NetWare 6.5 Operating System CD into the target server's CD-ROM drive, and wait for the CD volume to automount. If the CD volume does not automount, type `load cdrom` at the target server console.
6. Switch to the server GUI screen, select **Novell**, and then select **Install** from the menu.
7. When the Installed Products page appears, select **Add**.
8. When the Source Path page appears, browse to the root of the OS CD, select the Product.ni file, and select **OK**.
9. Verify that the correct path is entered to the Product.ni file in the Source Path page, and select **OK**.
10. When the NetWare 6.5 and JReport runtime license agreements appear, accept each agreement by selecting **I Accept** on each page.
11. At this point, the NetWare Deployment Manager performs the server health check mentioned earlier.
12. Determine if a backup of the old server boot files is desired. If so, specify the backup location in the provided box. HP recommends accepting the default option of Yes, and the default backup file location.
13. Determine if you want the server to reboot automatically after the installation completes. HP recommends accepting the default option of Yes.
14. Determine if you want to allow unsupported drivers to be installed. HP recommends accepting the default option of No, because HP does not provide support for unsupported driver installations.
15. Select either a Default or Manual upgrade by clicking the radio button next to the desired choice.
    - The Default upgrade automatically detects drivers and then upgrades the server to NetWare 6.5 with default settings.
    - The Manual upgrade lets you manually configure your drivers and the default settings used in the Default upgrade.

    NOTE
    HP recommends selecting **Manual**, as there is a driver that may need to be changed during the upgrade.

16. Select **Next** to begin the file copy.

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17. After the file copy completes, the Components poge disploys, ollowing you to choose ony odditionol NetWore 6.5 products for instollotion. To see o description of o product, ploce the cursor over the product nome.

> **NOTE**
> Because you are performing an upgrade, several components are already selected. These are the components currently installed on the server. Leaving the installed components checked reinstalls the products. Unchecking an installed component does not uninstall the product.

18. Select **Next**, ond review the Summory screen for occurocy of products to be instolled. If you ore sotisfied with the products listed, select **Copy Files**. Otherwise, select **Back** ond moke ony necessory chonges.
19. The upgrode process copies files for o few minutes. When the file copy completes, the system reboots. Do not remove the Product CD from the CD-ROM drive ot this time.
20. If you selected **Default** in step 16, skip to step 23. Otherwise, proceed with the next step.
21. The device drivers ore detected ond you ore presented with o screen or screens where you con modify these settings.
    - If you do not wont to modify the settings:
      a. Select **Continue**.
      b. Press **Enter**.
    - If you wont to modify the settings:
      a. Select **Modify**.

      > **NOTE**
      > For NetWare 6.5, the base functionality in CPQACPI.PSM and CPQMPK.PSM has been incorporated into Novell's ACPIDRV.PSM. You may need to modify the existing loaded PSM in this step so that ACPIDRV.PSM will be loaded. CPQACPI.PSM and CPQMPK.PSM are not supported on NetWare 6.5. Although both PSMs will load and run, unpredictable results may occur.

      b. Press **Enter**.
      c. Moke ony desired chonges.
      d. Select **Continue**.
      e. Press **Enter**.
22. The file copy continues, ond the GUI portion of the instollotion process begins.
23. When prompted, login to eDirectory (NDS) os o user with Admin rights. After successfully logging in, eDirectory upgrodes to the lotest version. Select **Next** when complete.
24. If this is the first NetWore 6.5 server in the tree, insert o license diskette, when prompted. Insert the diskette, browse to the locotion of the NLF file, ond select **OK**.

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25. Select **Next** at the license screen. If this is not the first NetWare 6.5 server in the tree, the existing license(s) displays. You have the option to install additional licenses or to accept the existing license and continue.
26. The NMAS installation screen appears. Select the desired login methods that you want to use for installing into eDirectory. When you select a login method, a description of the component appears in the Description box. The NDS login method is installed by default and is adequate for most installations.
27. Select **Next** to continue.

NOTE
The NMAS client software must be installed on each client workstation where you wont to use the NMAS login methods. The NMAS client softwore is included on the Novell Clients Softwore CD (July 2003).

---

28. At this time, eDirectory is upgraded with Volume information, and the selected NMAS login methods are installed. After these steps complete, the final file copy automatically begins.
29. When prompted, remove the NetWare 6.5 Product CD and license diskette (if present) and select **OK** to reboot the server. When the server successfully reboots, NetWare 6.5 is functional and ready for user login.

Post upgrade tasks

Updating NSS Volumes

If you upgraded from a NetWare 5.1 server with NSS volumes, you must complete the following procedure to update NSS volumes.

1. When prompted at the end of the upgrade, reboot the computer.
2. Make sure that all processes related to the NetWare 6.5 upgrade have completed.
3. At the server console, enter the following command:

   ```
   NSS /ZLSSVOLUMEUPGRADE=ALL
   ```

   The NSS volumes can now be mounted on the NetWare 6.5 server.

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Installing ar Updating Navell Client Saftware

If you ore running Novell Client softwore, upgrode your existing workstotions ot this time. You con olso choose to run workstotions without odditionol softwore using Novell Notive File Access Protocols.

For more informotion, see the Novell Client documentotion ot www.novell.com/documentation/index.html.

Installing Praduct Updates

For best performonce, downlood ond instoll the lotest updotes ovoiloble ot Novell Support ond Downloods: http://support.novell.com/.

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Troubleshooting

This section details the known issues with running Novell NetWare 6.5 on ProLiant servers and provides information about resolving them.

Table 5. Known issues

Issue 1	**ABEND in CPQSCSA.NLM May Occur When Setting ALLOC MEMORY CHECK FLAG = ON to Troubleshoot a NetWare 6.5 Issue on an HP ProLiant Server**	
	Description	When setting ALLOC MEMORY CHECK FLAG = ON to troubleshoot a NetWare 6.5 issue on an HP ProLiant server, the server may ABEND in the HP SCSI Subsystem Agent (CPQSCSA.NLM) when AllocSleepOK detects a free memory block that is corrupt. **NOTE:** Novell typically requests that administrators set the ALLOC MEMORY CHECK FLAG = ON to facilitate troubleshooting an unrelated issue. Applies to any HP ProLiant server running NetWare 6.5 and CPQSCSA.NLM.
	Workaround	To avoid the ABEND, unload CPQSCSA.NLM before setting ALLOC MEMORY CHECK FLAG = ON. This will allow the troubleshooting process to continue without the ABEND, although the functionality of CPQSCSA.NLM will be temporarily unavailable. When finished with the troubleshooting, set ALLOC MEMORY CHECK FLAG = OFF and reload CPQSCSA.NLM.
	Solution	This will be corrected in a future version of CPQSCSA.NLM. When more information becomes available, the advisory will be updated: http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c01300145.
Issue 2	**HP ProLiant ML350 G5 Server Series - HPQCISS.HAM in Novell NetWare 6.5 Service Pack 6 (SP6) Causes Server to Freeze**	
	Description	The server freezes, and after the server is restarted, it reports HPQCISS.HAM invalid Slot. This prevents the server from restarting. Review the HP Support Customer Advisory c01118819: http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?objectID=c01118819&lang=en&cc=us&taskId=101&prodSeriesId=1157688&prodTypeId=329290: NetWare Storage Agent May Become Unresponsive When HPQCISS.HAM Is Unloaded and Reloaded with the "\SLOT" Option on an HP ProLiant Server Configured with Two or More HP Smart Array SAS/SATA Controllers to determine if it is applicable.
	Solution	Replace the system board using Spare Part Number 413984-001. After the part replacement, install the Overlay CD (NW65SP6). The HPQCISS.HAM V1.06.02 dated June 19, 2006 ran on the server without issue for more than three days. Upgrade the drivers using PSP V7.90, which in turn upgrades the HPQCISS.HAM to version 1.10 dated October 2, 2006. This resolves the issue.

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Issue 3	**Continuous Beeps and CDM Driver Error Messages May Occur After Rebooting HP ProLiant Server Running NetWare 6.5 SP5 (or Later) With Failed Logical Drive(s) Configured on HP Smart Array SAS/SATA Controller**	
	Description	After rebooting a ProLiant server configured with one of the HP Smart Array SAS/SATA Controllers listed in the Scope section (below) and running NetWare 6.5 SP5 (or later), high-pitched beeps and console error messages from the Compaq SCSI Custom Device Module for NetWare (CPQSHD.CDM) similar to the following may repeatedly occur after a logical drive has failed: CPQSHD: The HP Smart Array controller Slot 4 LUN 1 disk device failed to initialize. This device will be deactivated. **OR** A scheduled work to do took over one minute to be run. Note: When the above scheduled work error message appears, the server will be unresponsive because of a time-out condition on the Smart Array SAS/SATA Controller. When the server reboots with failed logical drives, an event is generated which the HP Smart Array SAS/SATA Controller Hardware Abstraction Module for NetWare (HPQCISS.HAM) is unable to correctly process. This results in a time-out condition on the Smart Array Controller. Any ProLiant server configured with one of the HP Smart Array SAS/SATA Controllers listed below and running NetWare 6.5 SP5 (or later) when a logical drive has failed: • Smart Array P800 Controller • Smart Array P600 Controller • Smart Array P400/P400i Controller • Smart Array E200/E200i Controller
	Workaround	To stop the continuous beeps and CDM driver error messages, replace the failed drive(s). The beeps and messages will stop after repairing the failed logical drive(s).
	Solution	The continuous beeps and CDM driver error messages will be corrected in a future version of HPQCISS.HAM. When more information becomes available, the advisory will be updated: http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c00943073.

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Issue 4	**NetWare Peripheral Architecture (NWPA) Page Fault Processor Exception ABEND (Error Code 00000000) on HP ProLiant Servers Configured with HP 8 Internal Port SAS HBA with RAID and Running NetWare 6.5 SP5 and LSIMPTNW.HAM**	
	Description	HP ProLiant servers configured with the HP 8 Internal Port SAS Host Bus Adapter (HBA) with RAID and running NetWare 6.5 SP5 and the HP U320 SCSI Adapter and SAS HBA with RAID Driver for NetWare (LSIMPTNW.HAM) may encounter the following NWPA Page Fault ABEND: *Page Fault Processor Exception A8END (Error Code 00000000)* Additional information: The CPU encountered a problem executing code in NWPA.NLM. Stack pointer: (NWPA.NLM|Send_Adapter_Failed_Notification+0) This occurs when the NetWare Peripheral Architecture module (NWPA.NLM) references an invalid memory location while processing a failure event notification from LSIMPTNW.HAM for the 8 Internal Port SAS HBA with RAID. Any HP ProLiant server that is configured with HP 8 Internal Port SAS HBA with RAID adapter and running NetWare 6.5 SP5 and LSIMPTNW.HAM.
	Solution	To prevent this ABEND, upgrade to the NWPA.NLM version dated September 26, 2006, in NetWare 6.5 SP6, which is available for download on the Novell website at www.novell.com.
Issue 5	**NetWare 6.5 SP5 Installation on HP ProLiant ML570 G3 Server May Halt with "No Logical Drive Found" Message**	
	Description	Attempts to install NetWare 6.5 SP5 on an HP ProLiant ML570 G3 server may halt with the following message: No logical drive found This is a hardware discovery issue described by Novell at the following Novell URL. To locate the description, type "2974251" in the "Technical Information Search" screen, click the "Search by TID ID" and "Documentation" check boxes, then click the "Search" button. http://support.novell.com Any ProLiant ML570 G3 server that is installing NetWare 6.5 SP5.
	Solution	To successfully install NetWare 6.5 SP5 on a ProLiant ML570 G3 server, upgrade to the NetWare Bus Interface module (NBI.NLM) Version 5A, which is available from Novell at the following Novell URL: http://support.novell.com **NOTE:** To locate NBI.NLM Version 5A (nw65nbi5a.exe), select "Downloads - Patches" then search for NBI.NLM. The link to the patch is entitled "2974251: Updated NBI an HP hardware discovery issue."

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Issue 6	**NetWare 6.5 SP5 Advanced Configuration and Power Interface (ACPI) Features Do Not Function as Expected on HP ProLiant DL385 G2 Servers**

Description

The Advanced Configuration and Power Interface (ACPI) power management features do not function as expected on HP ProLiant DL385 G2 servers running NetWare 6.5 SP5, as shown in the following examples:

- All available processors may not be recognized and subsequently not utilized.
- The NetWare console commands DOWN and SHUTDOWN do not shut the server down as expected. Instead, they exit the console to the DOS prompt (C:\NWSERVER directory).
- Pressing the server power button may abruptly power the server off when NetWare is running.

This occurs because the APCIDRV.PSM driver is not being installed correctly during the NetWare 6.5 SP5 installation. When this occurs, the following error message appears:

ACPIDRV.PSM-FATAL: Error initializing the ACPI subsystem.

Any HP ProLiant DL385 G2 server running Netware 6.5 SP5, which includes ACPIDRV.PSM Version 1.05g (October 3, 2005). ACPIDRV.PSM and the associated modules from SP5 are listed below:

Table 6a. Affected ACPIDRV.PSM Driver and Associated Modules

Module Name	Version	Date
ACPIDRV.PSM	1.05g	October 3, 2005
ACPIASL.NLM	1.05d	October 3, 2005
ACPICA.NLM	1.05c	October 3, 2005
ACPICMGR.NLM	1.05c	October 3, 2005
ACPIPWR.NLM	1.05c	October 3, 2005

Solution

To gain ACPI power management support after this issue occurs, install the updated version of ACPIDRV.PSM, which is available from Novell as ACPI PSM module update for NetWare 6.5 SP5 - TID2974107 at the following Novell URL:

http://support.novell.com/cgi-bin/search/searchtid.cgi?2974107.htm

This update contains the following versions of ACPIDRV.PSM and associated modules:

Table 6b. Updated ACPIDRV.PSM Driver and Associated Modules

Module Name	Version	Date
ACPIDRV.PSM	1.05q	August 18, 2006
ACPIASL.NLM	1.05n	August 18, 2006
ACPICA.NLM	1.05n	August 18, 2006
ACPICMGR.NLM	1.05n	August 18, 2006
ACPIPWR.NLM	1.05n	August 18, 2006

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Issue 7	**Using HP Gigabit Ethernet NIC Teaming Driver (QASP.LAN) in a NetWare 6.5 Clustering Environment May Result in Discarded "Gratuitous ARP" Packet and Lost Communications After Cluster Resource Failover**	
	Description	On ProLiant servers running Novell Cluster Services and the HP Gigabit Ethernet NIC Teaming Driver (QASP.LAN), a cluster resource failover from one cluster node to another may result in transmission of an invalid MAC address (FF FF FF FF FF FF) in a "Gratuitous ARP" packet to the router. When this occurs, the router will discard the ARP packet it receives and the ARP information for that IP address will not be updated in the router table, causing lost communication when the router attempts to send information to the original MAC address associated with the IP address. Note: A "Gratuitous ARP" packet is generated during a failover from a cluster resource to update the Address Resolution Protocol (ARP) cache in the router with the new MAC address for the IP address of the cluster resource. This issue, which is not specific to HP, has been documented by Novell in TID 10095608: Clients Lose Connection with Cluster Resource After Migration[1]. Any ProLiant server running Novell Cluster Services and the HP Gigabit Ethernet NIC Teaming Driver (QASP.LAN).
	Solution	To recover from the lost communications if they occur, reboot the server to clear the ARP table. To avoid the lost communications, reconfigure NetWare to use the Novell Virtual Teaming Driver instead of QASP.LAN. Instructions for configuring NIC teaming can be found in the Novell TCP/IP Administration Guide for NetWare 6.5, which is available at www.novell.com/documentation/nw65/tcpipenu/data/hc7znq4j.html. At the above URL, make the following selections: 1. Configuring Protocols 2. NIC Teaming Solution 3. Configuring Teaming Using INETCFG

[1] TID 10095608 can be viewed at www.novell.com/support/search.do?cmd=displayKC&docType=kc&externalId=10095608&sliceId=&dialogID=17284484&stateId=0 0 17286963.

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Issue 8	**Installation of NetWare 6.5 SP5 Halts on HP ProLiant DL385 G2 Server While Loading IDECD.CDM Driver**	
	Description	An installation of NetWare 6.5 SP5 on an HP ProLiant DL385 G2 server will halt while loading the Novell ATA/IDE CD/DVD Custom Device Module (IDECD.CDM) driver. The installation cannot proceed at this point and the server must be powered down. This occurs because the Novell ATA/IDE/ATAPI/SATA Host Adapter Module (IDEATA.HAM) does not support the Broadcom/Serverworks HT-1000 chipset in the server and therefore cannot initialize the default DMA features. As a result, IDECD.CDM is unable to bind to the CD-ROM device, causing the installation to stop responding. **NOTE:** This has been documented by Novell in TID 3725177.[2] Any ProLiant DL385 G2 server that is installing NetWare 6.5 SP5.
	Solution	The installation issue has been corrected in an updated version of IDEATA.HAM, which is available in the Novell NetWare 6.5 Support Pack 5 Install Hangs While Loading IDECD.CDM advisory[3]. **NOTE:** The instructions for updating IDEATA.HAM during the installation are included in the referenced advisory.
Issue 9	**HP System Management Homepage (SMH) Does Not Display Physical Drive Information for Hard Drives Connected to HP 8 Internal Port SAS Host Bus Adapter with RAID Configured in an HP ProLiant ML570 G3 or ProLiant ML570 G4 Server Running NetWare 6.5**	
	Description	Physical drive information is not displayed on the HP System Management Homepage (SMH) for hard drives attached to an HP 8 Internal Port SAS Host Bus Adapter with RAID configured in an HP ProLiant ML570 G3 or ProLiant ML570 G4 server running NetWare 6.5. Version 7.60 (and earlier) of the HP Insight Management Storage Agents does not provide this information to the SMH (or similar software applications) because version 7.60 (and earlier) of the agents does not fully support this server configuration running NetWare 6.5. Therefore, all physical drive information is displayed as Unknown . Any HP ProLiant ML570 G3 or ProLiant ML570 G4 server running NetWare 6.5 and the HP Insight Management Storage Agents Version 7.60 (or earlier) and configured with an HP 8 Internal Port SAS Host Bus Adapter with RAID.
	Workaround	As a workaround, physical drive information may also be obtained from the LSI Logic Configuration Utility, which is accessed by pressing the F8 key during Power-On Self-Test (POST).
	Solution	The physical drive information for hard drives will be displayed in the SMH in a future version of the Storage Agents. When more information becomes available, this advisory will be updated.

[2] TID 3725177 is available at www.novell.com/support/search.do?cmd=displayKC&docType=kc&externalId=3725177&sliceId=SAL_Public&dialogID=1558374&stateId=1 0 1560022.

[3] This advisory is available at www.novell.com/support/search.do?cmd=displayKC&docType=kc&externalId=3725177&sliceId=SAL_Public&dialogID=1558374&stateId=1 0 1560022.

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Issue 10	**NetWore 6.5 Hangs During Install on HP ProLiont ML370 G4 servers**	
	Description	During NetWare installation, the ML370 G4 server would experience hangs with the NW65SP5 Overlay CD. No CD-ROM device was detected in this system. Loaded the appropriate driver (HAM).
	5olution	Change IDE option cable select to primary master for the CDROM and the issue will resolve
Issue 11	**NetWore 6.5 5P5 ACPI Power Manogement Features Do Not Function os Expected on HP ProLiont 5ervers Based on Intel Duol-Core Xeon 5100 5eries Processors**	
	Description	The ACPI power management features do not function as expected on HP ProLiant servers that are based on Intel Dual-Core Xeon 5100 Series processors and running NetWare 6.5 SP5. For example, the NetWare console commands DOWN and SHUTDOWN do not shut the server down; instead, these commands return the console to the DOS prompt (C:\NWSERVER directory). Additionally, pressing the server power button will abruptly power the server off when NetWare is running. This occurs because the APCIDRV.PSM driver is not being installed during the NetWare installation, preventing the ACPI power management features from becoming available to NetWare. Any of the following ProLiant servers that are configured with Intel Dual-Core Xeon 5100 Series Processors and running NetWare 6.5 SP5: • ProLiant DL350 G5 • ProLiant DL360 G5 • ProLiant DL370 G5 • ProLiant DL380 G5 • ProLiant BL20p G4 Server Blade • ProLiant BL460c Server Blade **NOTE:** The servers listed above are NOT affected if configured with Intel Dual-Core Xeon 5000 Series.
	5olution	To avoid the issues with ACPI power management, upgrade to the updated version of ACPIDRV.PSM, which is available from Novell through a link in the Technical Information Document, *ACPI PSM module update for NetWare 6.5 SP5 - TID2974107*, which is available at http://support.novell.com/cgi-bin/search/searchtid.cgi?2974107.htm.
Issue 12	**"CPU Hog Detected by Timer" ABEND May Occur when Installing or Running NetWore 6.5 on on HP ProLiont DL380 G5 5erver if o PCI-Express Adopter Is Configured in 5lot 3**	
	Description	NetWare may ABEND with a CPU Hog Detected by Timer message when installing or running NetWare 6.5 SP5 on an HP ProLiant DL380 G5 server with a System ROM (P56 family) dated 30 May 2006 if a PCI-Express Adapter is configured in Slot 3 of the PCI-Express Riser Cage. When this occurs, the server stops responding and the message, Please Wait appears while the network adapter driver is loading, followed by the ABEND. This occurs because the interrupt for Port 2 of the Embedded Dual NC373i Multifunction Gigabit Network Adapter is shared with Slot 3 in the ACPI) table. Any HP ProLiant DL380 G5 server installing or running NetWare 6.5 SP5 with a System ROM (P56 family) dated 30 May 2006 and configured with a PCI-Express Adapter in Slot 3 of the PCI-Express Riser Cage.

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	Workaround	As a workaround until the updated System ROM is available, move the controller to a slot OTHER than Slot 3 of the PCI-Express Riser Cage.
	Solution	The CPU Hog Detected by Timer ABEND has been corrected in an updated version of the System ROM for the ProLiant DL380 G5 server. When this System ROM becomes available, this advisory will be updated: http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c00727551 .
Issue 13	**System Management Homepage Displays Information for Only One Port of an HP NC320m Dual Port PCI Express Gigabit Server Adapter Installed in an HP ProLiant BL20p G4 Server Blade Running Novell NetWare 6.5 SP5**	
	Description	HP System Management Homepage (SMH) displays information for only one port of an HP NC320m Dual Port PCI Express Gigabit Server Adapter installed in an HP ProLiant BL20p G4 server blade running Novell NetWare 6.5 SP5 when the operating system is installed using an HP SmartStart Release 7.51 Assisted Installation. This condition occurs because SmartStart Release 7.51 Assisted Installation does not use the Q57.LAN driver for the NC320m adapter because the PCI information for this adapter is not available in the Q57.LDI file. Instead, the B57.LAN driver is loaded and results in this behavior. Any HP ProLiant BL20p G4 server blade configured with an HP NC320m Dual Port PCI Express Gigabit Server Adapter and running Novell NetWare 6.5 SP5 installed using an HP SmartStart Release 7.51 Assisted Installation.
	Workaround	To view NC320m adapter information using the System Management Homepage, use INETCFG and select the Q57.LAN driver to load for the NC320m adapter. Additional information on INETCFG is available at the following URL: www.novell.com/documentation/oes/index.html?page=/documentation/oes/utlrfenu/data/hnbvotqk.html#hnbvotqk
	Solution	The SmartStart Release 7.51 Assisted Installation does not use the Q57.LAN driver for the NC320m adapter because PCI information is not available in the Q57.LDI file. Instead, the B57.LAN driver is loaded and results in this behavior. This condition will be corrected in a future release of SmartStart or ProLiant Support Pack. This advisory will be updated when additional information becomes available: http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c00711917.
Issue 14	**HP ProLiant ML310 G3 Server with Integrated Lights-Out 2 (iLO 2) That Is Booting or Installing NetWare 6.5 May ABEND with CIOS Error Message**	
	Description	An HP ProLiant ML310 G3 server that is either booting or installing NetWare 6.5 with SP4 (or earlier) and Integrated Lights-Out 2 (iLO 2) firmware version 1.00 may ABEND with the following error message, which references the NetWare Consolidated Input / Output Subsystem (CIOS): P01: CIOS Invalid or corrupted memory returned to PlatFree This occurs because the USB driver in NetWare 6.5 SP4 (or earlier) does not support iLO 2. Any HP ProLiant ML310 G3 server that is either booting or installing NetWare 6.5 with SP4 (or earlier) and Integrated Lights-Out 2 (iLO 2) firmware version 1.00.

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	Solution	To prevent the CIOS ABEND on a ProLiant ML310 G3 server, upgrade to BOTH the following: • NetWare 6.5 SP5, which is available on the Novell website at http://support.novell.com/servlet/downloadfile?file=/sec/pub/nw65sp5.exe/ AND • iLO 2 Firmware Version 1.01 (or later) To download, go to www.hp.com/support and select the country and language. • Select the **Download drivers and software (and firmware)** radio button. • Type the name of the server in the window and press **ENTER**. • Select **Novell NetWare 6.5** as the operating system. • Select **Firmware – Lights-Out Management** as the quick jump location. • Click **Download**.
Issue 15	**HP Integrated Lights-Out 2 (iLO 2) Advanced Features Do Not Function on ProLiant Servers with iLO 2 Running NetWare 6.5**	
	Description	On a ProLiant server with HP Integrated Lights-Out 2 (iLO 2) running NetWare 6.5 with SP4 (or earlier), the mouse and keyboard will not function when using the iLO 2 Advanced features Remote Console and Virtual Media. This is caused by an incompatibility between iLO 2 USB devices and the NetWare 6.5 USB driver, which results in the following console error: *** UHCI Advisory: Port Enable failed to set PORTENABLE bit: regValue =0x83 Any ProLiant server with HP Integrated Lights-Out 2 (iLO 2) that is running NetWare 6.5 with SP4 (or earlier). **NOTE:** Currently, iLO 2 is integrated on ProLiant ML310 G3 and ProLiant DL320 G4 servers. For an updated list of ProLiant servers with iLO 2, refer to the Remote Management - Integrated Lights-Out Products Web page at the following URL: http://h18013.www1.hp.com/products/servers/management/remotemgmt.html
	Solution	To enable the mouse and keyboard when using Remote Console or Virtual Media, upgrade to iLO 2 Firmware Version 1.01 AND NetWare 6.5 SP5, which are available at the following URLs: • iLO 2 Firmware Version 1.01 (or later) To download, go to www.hp.com/support and select the country and language. • Select the **Download drivers and software (and firmware)** radio button. • Type the name of the server in the window and press **ENTER**. • Select **Novell NetWare 6.5** as the operating system. • Click **Firmware – Lights-Out Management** as the quick jump location. • Click **Download**. AND • NetWare 6.5 Support Pack 5 (SP5), which contains an updated NetWare Universal Host Controller Interface (UHCI) driver. NetWare 6.5 SP5 is available on the Novell web site at the following URL: http://support.novell.com/servlet/downloadfile?file=/sec/pub/nw65sp5.exe/

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Issue 16	**ProLiont Server with AMD Opteron Processor Running NetWore 6.5 SP3 (or Later) May Stop Responding When Manuolly Loading ACPIDRV.PSM or When Unloading the HAM Madule Manoging the Boot Portition (Drive C:)**	
	Description	HP ProLiant servers that are based on the AMD Opteron processor (listed in the Scope section below) and running NetWare 6.5 SP3 (or later) may stop responding with the messages listed below when one of the following occurs: • When manually loading the Advanced Configuration and Power Interface Platform Support Module for NetWare (ACPIDRV.PSM), after starting NetWare with the "SERVER -NS" command, the server may stop responding and display the following error message: *Error reading from load file* **NOTE:** This is documented on the Novell website in TID #10098673 at the following URL: http://support.novell.com/cgi-bin/search/searchtid.cgi?10098673.htm OR • When loading or unloading the Compaq Unified RAID Host Adapter Module Driver for NetWare (CPQRAID.HAM), the Compaq SCSI Custom Device Module for NetWare (CPQSHD.CDM), or the Novell NetWare SCSI Hard Drive Custom Device Module (SCSIHD.CDM), the server may stop responding and display a Java Exception message. **NOTE:** This is documented on the Novell website in TID #10098673 at the following URL: http://support.novell.com/cgi-bin/search/searchtid.cgi?10098673.htm OR • When running NetWare 6.5 SP3 on a server with multiple AMD Opteron processors, the server may stop responding and display the following error message: *Error 0X00001105 Starting Processor 1 .* *Processor 1 activation failed.* Any HP ProLiant DL145, ProLiant DL145 G2, or ProLiant DL385 server that is running NetWare 6.5 SP3 (or later).
	Solution	To avoid the server unresponsiveness, perform one of the following: • On an AMD Opteron based ProLiant server, add the "-FB" parameter to the ACPIDRV.PSM load command when manually loaded or in STARTUP.NCF. This will force the interrupts to go into Virtual Wire Mode B (when ACPI relinquishes interrupt control). OR • On an AMD Opteron based ProLiant server with multiple processors, start NetWare 6.5 SP3 with the following command: `SERVER –NNX`

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Issue 17	**HP ProLiont Server Configured with S12 MB RAM ond Running NetWore 6.S May ABEND When Deactivoting SYS Volume or When Unloading SYS Volume Driver**	
	Description	An HP ProLiant server running NetWare 6.5 may intermittently ABEND when deactivating the SYS volume or when unloading the SYS volume driver. This may also occur when the server is being rebooted or forcibly shut down (e.g. by the SHUTDOWN command or a critical fan failure). This is more likely to occur on a server configured with approximately 512 MB RAM, as described in Novell TID #10099897, "NetWare Servers abend when deactivating the SYS volume or unloading the driver," which is located at the following URL: http://support.novell.com/cgi-bin/search/searchtid.cgi?10099897.htm When this occurs, a Page Fault Processor Exception may result in an ABEND, or a message may appear on the logger screen indicating a Java Exception with "insufficient server memory to execute the class." The following drivers are examples of those that might be unloaded by NetWare to deactivate the SYS Volume (resulting in the ABEND or Java Exception): • IDEATA.HAM • HPQCISS.HAM • CPQRAID.HAM • AACRAID.HAM • LSIMPTNW.HAM **NOTE:** This is not an HP-specific issue and is documented by Novell in TID #10099897 on the Novell website. Any HP ProLiant server running NetWare 6.5.
	Workoround	To avoid the ABEND, do not deactivate the SYS volume OR unload the driver that supports the SYS volume. To prevent the ABEND from occurring, upgrade the server memory to a minimum of 1024 MB.
	Solution	When more information becomes available, the advisory will be updated: http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c00587074.

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For more information

For additional information, refer to the resources listed below.

Table 6. Web resources

Source	Hyperlink
HP and Novell Partnership site	www.hp.com/go/novell
Novell website	www.novell.com

Call to action

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